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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,500	02/18/2004	Aaron Y. Mosher	038190/272189	2940

826 7590 06/17/2005

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER	
SOTOMAYOR, JOHN B	
ART UNIT	**PAPER NUMBER**
3662	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/781,500	MOSHER ET AL.	
	Examiner	Art Unit	
	John B. Sotomayor	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12 and 13* is/are allowed.

6)☒ Claim(s) *1,14 and 25* is/are rejected.

7)☒ Claim(s) *2-11,15-24 and 26-35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *18FEB04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

EA

DETAILED ACTION

Drawings

1. The drawings filed February 18, 2004 appear to be formal and are acceptable.

Information Disclosure Statement

2. The information disclosure statement filed February 18, 2004 has been entered and considered. An initialed copy of the PTO-1449 by the Examiner is attached.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 14, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Caputi, Jr. ('334) or Farmer et al ('151).

The claims are considered to be met by Caputi, Jr. ('334) or Farmer et al ('151) who disclose a method and system for determining angular position of a target including, inter alia, scanning the object at crossrange positions and determining a target parameter between at least two beam positions.

Caputi, Jr. ('334) discloses range and velocity of target vehicles are determined from the angles of arrival of strobes from the target vehicles to provide a completely passive, linear, ranging system. From inputs which include strobe angle, time of strobe and receiving vehicle cross range position, the targets vehicles ranges and velocities are determined. A visual presentation is provided to enhance detecting the target vehicle in a high density environment. Caputi, Jr. ('334) also discloses another technique called PROSE, for Passive Ranging On Scanning Emitters. This technique is applicable to ranging on an enemy AWACS-like emission: that is, the emission from a scanning radar in place of the jammers or jammer-like sources considered above. In this case, the enemy radar scan rate can be measured rather accurately using the average interval between main lobe intercepts determined over a long time base. If then two intercept antennas are provided on the friendly surveillance aircraft, and the time delay between corresponding main beam intercepts on these two antennas is calculated rather accurately, the parallax angle, or angle of rotation of the enemy scanning radar, between the intercepts at the two antennas can be calculated. Then, knowing the distance between the two intercept antennas, the range to the enemy scanning radar from the friendly surveillance aircraft can be calculated.

Farmer et al ('151) disclose that the system separately tracks cars near bridges and other stationary objects. In addition to determining the centroid of the cluster of sensor reports that are from the same target, the algorithm also computes the cross-range extent of the target. This value is also included in the tracking system parameters, and a smoothed estimate of this value is computed with each additional sensor input. Targets such as automobiles at far range will not have an accurate estimate due to the limitations in the sensor angular accuracy, however, as the target range decreases, the target subtends multiple beams and a more accurate estimate is possible. The extent of a target is computed using a weighted combination of the total computed extent for each antenna scan, as well as a temporal analysis of the random variation of the cross range sensor report estimate since part of the variation in a target's angular position is due to glint effects (random scattering locations on the target). This is accomplished by augmenting the Kalman filter with a state to track the size of the target. The size state is updated and predicted based on its value and the distance to the target (the x and y states) since as the target moves closer it should grow larger. This allows the system to detect the difference between relatively small objects--such as street signs, or bicycles--and vehicles or other large massive and potentially dangerous objects.

5. Claims 1, 14, and 25 are rejected under 35 U.S.C. 102(a) as being anticipated by Chiang et al ('235).

The claims are considered to be met by Chiang et al ('235) who disclose a method and system for determining angular position of a target including, inter alia, scanning the object at crossrange positions and determining a target parameter between at least two beam positions.

Chiang et al ('235) disclose a multibeam system for detecting a target, albeit, in a sonar application, taking into account the crossrange to determine target parameters.

Allowable Subject Matter

6. Claims 12 and 13 are allowed.

7. Claims 2-11, 15-24, and 26-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

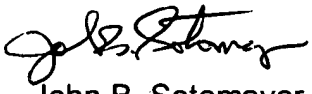
Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited prior art show various target parameter determination systems.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Sotomayor whose telephone number is 571-272-6978. The examiner can normally be reached on Monday to Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom H. Tarcza, can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John B. Sotomayor
Primary Examiner
Art Unit 3662